CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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COUNTRY	East Germany	REPORT		25 X 1
SUBJECT	VEB Elektrochemisches Kombinat Bitterfeld 1952 and 1953 Research Programs	DATE DISTR.	14 August	1953
DATE OF INFO.		REQUIREMENT NO	. RD	25X1
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	THE SOURCE EVALUATIONS IN THIS REPORT THE APPRAISAL OF CONTENT IS TE (FOR KEY SEE REVERSE)			
				25X1

1. 1953 Research program

The 1953 research program has been approved and passed to the works. It encompasses a total of 52 assignments: 1

	Assignment ²	Allocation (thousands of Marks.)
1.	Sodium chlorite	7 0
2.	Cerium oxide	80
3.	Titanium metal	100
4.	Iron powder	120
5.	Iron alloys by aluminothermic process	70
6.	Welding electrodes	60
7.	Aluminum-magnesium alloys	180
8.	Lead-bearing metals	50
9•	High-duty cast iron	90
10.	Biological testing	30
11.	Fluorine polymers	120 25X1
12.	PVC-perpolymers	150
13.	PVC-pressure chlorination	60
14.	PC stock solutions	50
15.	Mixed polymers	70
16.	Dicarboxylic esters (plasticizers)	60
17.	Stabilizers	40
18.	Tar utilization (Teerverwertung)	100
19.	Perchlorethylene	× 50
20.	Pentachlorophenol	50
21.	Trichlorostyrene	60
22.	Polarographic development work	13

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(Note: Washington Distribution Indicated By "X"; Field Distribution By "#".)

25 YEAR RE-REVIEW

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		معاد سادي آهاي معاد سادي ها لوال
	Assignment	Allocation (thousands of Marks)
23 . 24 .	Oxidation contact catalysts Influence of impurities on the	72
	chemical polishing of light metals	16
25.	Soil pests	25
26.	Weed killers	25
27.	Gamma - estimation	15
28.	Atomizer (Verneblungsgerast)	15
29.	Alumina from clay:	<u>}</u>
	a. Combined process b. Specketer process	1,260
	c. Laboratory	· ·
30.	d. Investigation of raw materials)
	Anhydrous MgCl ₂	120 25X1
31.	Fluorine	100
32.	Tantalum	_60
33.	Spinning layer process	100
34.	Metal stabilizers	15
35.	PVC flame jets (PVC-Flammspritzen)	60
36.	High frequency and infra-red	50
37.	Methyl chloride pressure distillation	50
38.	Carbon tetrachloride	40
39.	Triethylhexyl phosphate	100
40.	Pure hexa	50
41.	Benzene losses	50
42.	Enamels	40
43.	Active silicic acid	35
44.	Titanium dioxide	60
45.	Acid putty (Sacurekitte)	20
46.	Rivet alloys (Nietlegierungen)	24
47.	Aluminum leads (Leitaluminium)	24
48.	Reagent atomizing (Wirkstoffverneblung)	30
49.	Exchange of nonferrous metals (PVC)	60
50.	Igurit	60
51.	Continuous chlorate production	60
52.	Winning of "Hexa" (Hexa-Ausbeute)	50
	Total:	4,359

2. <u>1952 Program</u>

For comparison, the 1952 research program was as follows:

	Assignment	Allocation (thousands of Marks)	25X1
1. 2. 3. 4. 5. 6. 7.	Production of alumina from clay Titanium dioxide Sodium chlorite Annydrous MgCl ₂ Electrolytic fluorine Potassium ferrichromate Anhydrous sodium metasilicate	1,050 78 60 68 60 24 12	

25X1 - 3 -Allocation Assignment 25X1 (thousands of Marks) 132 Co-Al catalyst for oxidation of NH2 8. 30 30 New kinds of acid resistant putties 10. 50 Methylene chloride 31. 72 Fluorine containing plastics 32. Igelit plasticizers 33. Production of partly-fabricated articles 34. 60 for testing plasticizers 18 Hard montan wax 18 Porous Igelit 120 37. High-polymer PVC New polymerization process for low PVC polymers 138 New process for polymerization of asymetric 39. ?? dichlorethylene High-frequency welding of Igelit 55 40. 115 Improvement of production of hexachlorocyclohexane 41. 42. 84 Testing of pest-exterminators 120 51 New aluminum alloys 35 Improvement of aluminum alloys 30 New recipe for welding electrodes Tantalum metal 30 56. Heat treatment of high remanence magnet alloys 30 57. Iron powder 18 Cerium free "spark" metal 58. 50 Distillation and rectification columns 60. 48 Improvement of Igurit 61. 120 Development of Hooker Cell 62. 40 Improvement of graphite electrodes 12 Polarographic investigations 66. Development of caustic purifying process (from NaCl) by NH3 process 67. 150 Chemically pure H2TeO4 and H2SeO4 Plant for 2% potassium hypochlorite 20 68. 36 69. 90 Chlorination kiln for various materials 70. 24 Acid-resistant paints 71. Spark-free, acid, solvent, and caustic-resistant 20 flooring material 48 Lead-bearing metals 72 Hyposulphite and amalgam reduction 150 Vinyl chloride without acetylene 48 Oxalic acid without sugar or cellulose

3. Production achieved in 1952 and planned for 1953:

Stabilizers for Vinidur cable covering

The following figures show the production actually achieved by the works in 1952, wherever they are known. The planned production figures for 1953 are also shown.

48

Product	Quantity	Total=t Sold=s	Actual-1952	Planned-1953	25X1
Inorganic Department:			ч		
Caustic soda lye;II	I tons	t	14,680	14,000	25X1

- 4 - 25X1

<u>Product</u> 90	antity To	tal=t ld=s	Actual-1952	Planned-	1953
Caustic soda lye;I	NaOH	t s	4,143 14,080	5,300 14,433	
Caustic potash lye	T. KOH	t	26,660 6,425	24,200	
Solid KOH tech.	tons	t s	5,102 5,094	5,600 5,588	
Chlorine gaseous; I III	tons	t t		19,410	
Chlorine liquid	tons	t	8,995 6,540	8,750 5,750	
Hydrogen uncomp.cl. I cl. III chlorate	m ³ x10 ³	t t	<i>;</i>	6,020 3,650 8,980	
Hydrogen chloride	tons	t	23,979 12,572	28,000 17,000	
K and Na chlorate	tons	t s	17,774 17,639	18,600 18,380	25 X 1
Agrosan	tons	t=s		160	
Wegerein	tons	t=s		300	
Anforstan	tons	t=s		150	
Potassium dichromate	tons	t 8	4,800 3,132	5,000 2,730	
Chromic acid	tons	t≕s	466	560	
Basochrom	tons	t=s	1,144	1,080	
Chrome alum	tons	t=s	28	300	
Chromic oxide	tons	t s	26 22	250 250	
Barium potassium chromate	tons	t=g		100	
Potash (calc.) K ₂ CO ₃	tons	t s	10,215 10,007	12,000 11,800	
Graphite electrodes for chemical industry	tons	t s	2,600 1,274	3,800 1,400	
Graphite electrodes for metallurgy	tons	t=s	10,160	10,700	* .
Phosphorus, raw yellow	tons	t	1,321	1,480	

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				W. W. 118 W. 118	
 . <u>Product</u>	Quantity Total	1=t 1=s	Actual-1952	Planned-1953	<u>3</u>
Phosphorus, yellow pur	e tons	t	1,281 735	1,465 635	
Phosphorus, red	tons	t=s	22	120	
Ferrophosphorus	tons	t=s	131	180	
Barium chloride	tons	t s	1,428 1,179	1,200 960	:
Titanium dioxide	tons	t s	1,188	2,000 1,800	
Potassium permanganate	tons	t	2,127 2,113	2,400 2,400	
Acid fast putty	tons	t	1,897 1,787	1,350 1,350	
Oxygen	m ³ x10 ³	t	1,359 297	1,320 630	
Nitrogen comp.	$m^3 \times 10^3$	t	186 178	150 150	25X1
Compressed air	$m^3 \times 10^3$	t	27 15	30 30	
Generator tar	tons	t	2,255 2,225	2,000 1,988	
Generator tar-oil	tons	t	667 619	520 520	
Quicklime	tons	t	4,055 270	4,000	
Boric acid cryst.	tons	t		42 30	
Barium chlorate Boron carbide	tons Kilos	t≃s t s	1 455 340		
Chlorine to Wolfen	tons	t=s	997		
Ferric chloride	tons	t=s	289		
Elrasal	tons	t s	477 402		
Gas-purifying compound	tons	t=s	42		
Graphitized anthracite	tons	t	170		
Graphite powder	tons	t s	274 238	Ŧ	
Worked graphite	tons	t=s	0.7		٠,

		-	6 -			25X1
1	Product Quant	ity Tot		Actual-1952	Planned-19	<u> </u>
Graphite	e waste	tons	t=s	197		
Igurit 1	neat exchangers	item#	t	162 159		0EV4
Potassin	m perchlorate	tons	t=s	2		25X1
Colloida	al graphite	tons	t	5.8 5.3		
Manganes	se carbonate	tons	t	12 5		* 1
Mangane	se chloride (aq.)	ton s	t=s	12		
Mangane	se chloride (anh.)	tons	t=p	24		
Mangani	te	tons	t=s	114	* .	
Mangane	se mud	ton s	t=s	366		
Sodium	metal	tons	t s	19.8 19.7	4.	
Sodium	perchlorate	tons	t=s	19		
Phosokr phosph	esol (tricresyl	tons	t=s	. 1		
Phospho	rus kiln dust	tons	tzs	109		
Potash :	lye	tons	t=s	4		
Tisil		tons	t=s	162		
Thawing	compound	tons	t=s	14		
Potassi	um sulphate	tons	t	16 9		
Nitrogen Depart	ment			* .		
Crude n	itric acid ogen)	tons	t	94,748 21,055	96,280 21,395	
	ammonium nitrate ogen)	tons tons	t t	34,902 34,902	177,700 36,430 36,430	057/4
	m nitrate tech. ogen)	tons	t	6,140 6,140	14,630 5,120 5,120	25X1
Sodium (sic)	nitrite/nitrate lye (nitrogen)	tons	t=s	2,264	2,400	
Organic Departm	ent					
Chlorob	penzene	tons	t	4,105 1,459	4,200 970	25X 1

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				A	
Product	Quantity Tota Sold	<u>1=t</u> =s	<u> Actual-1952</u>	Planned-1	953
o-Dichlorobenzene	tons	t=s	231	250	
p-Dichlorobenzene	tons	t=s	386	500	
Lighter fuel	1,000 bots	.t=s	608	480	
Phosphorus trichloride crude	e tons	t	2,364	3,035	
PCl ₃ pure	tons	t s	178 160	150 135	
Phosphorus oxychloride	e tons	t s	2,343 13	3,200	
Benzotrichloride crud	e tons	t	537	405	
Benzyl and benzal chlorides	tons	t=s	159	160	
Gesarol	tons	t	2,886 2,857	3,600 3,548	
Tricresyl phosphate	tons	t s	3,951 2,489	6,000 4,314	
Triphenyl phosphate	tons	t	135 86	240 240	25X1
Benzoic acid	tons	t=s	218	180	
Carbon tetrachloride	ton s	t s	5,262 5,033	4,800 4,800	
Sulphur in lumps	tons	t=s	2,224	1,920	
Chloral	ton s	t	2,068 606	2,300 500	
HCC active material	tons	t		25	
Duplexan Hexitol Duplexol Duplinan Aerosol	tons	t	730 729	2,000 20 10 10	
Oxalic acid cryst.	tons	t s	1,955 1,910	2,100 2,040	
Calcium formate	tons	t	1,738 41	1,800	
Kofa-salt	tons	t=s	372	450	
Formic acid	tons	t	731 684	840 840	

				,	25X1
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Product	Quantity Tot		Actual-1952	Planned-1953	
Methylene chloride	tons	.t	32 23	600 5 7 0	
Pentachlorophenol	tons	t=s		45	25X1
Hydrochloric acid	tons	t s	5,175 5,502	7,000 4,800	
Benzene reclaimed Chloralhydrate Chloroform tech. Sulphur chloride Etingal Phosphorus pentachlori Plasticizer KP Benzene hexachloride Trichlorethylphosphate Plastic department	tons tons	t t = = = = = = = = = = = = = = = = = =	19 10 14 8 2 8 198 3		
Igelit - P. C. U.	tons	t	4 , 395 849	5,700 2,400	
Igelit - P. C.	tons	t s	999 825	1,440 1,255	
Vinidur foil Vinidur tube and rod Vinidur welding rods Vinidur plates,)) tons)	t	2,913 1,576	2,050 590 660 480 30 29	
Igelit sheet Igelit sheet printed Igelit soles rolled Igelit injection and press material	tons	t	4,132 2,584	60 2,000 776 360 360 600 600 1,200	25X1
Igelit gasket material Igelit hose, etc. Igelit floor and	}			120 119 255 254	
furniture covering	m ³ x10 ³	t	1,059 1,047	1,000	
Igelit tablecloths, printed	items	t 8	1,577 1,576	1,380 1,380	
Igelit tablecloths; embossed	items	t=s	423	420	

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25X1

	Product Qua	ntity Tota Sold		Actual-1952	Planned-19	53
	T			202	400	
	Igelit adhesive solution	tons	t s	383 367	420 390	
	Igelit stock solution for	tone	t	921	800	
	paint paint	COM	8	820	800	
	Igelit pastes	tons	t	5,241	4,800	
	TRATIC PARCER	COMP	8	3,519	3,000	
	Igelit soles, pre-set)				390	
	Igelit soles, injected)				660	
)		t	1,256	540	
	Igelit soles and heels	i i	8	1,222	300	
	Special products	÷ .			50	
	Igelit boots	1000 pr.	t	397	420	25X1
		•	ŝ	393	420	20/(1
	Igelit shoes	1000 pr.	t	136	84	
	250220	acco pot	8	131	84	
	Vinidur fly-press parts	*			28	
	Vinidur "Werkstatt") (shop)				128	
	Vinidur heat fabricated)	tons	t	980	84	
	containers)		8	946		
	Packing containers	!			480	
	Gutters and fall pipes)	Ý			480	
	Vinidur aprons	1000	t	785	232	
			s	778	232	
	Thinners for Vinidur					
	lacquer	tons	t	2		
	Igelit waste	tons	t=s	133		
	Vinidur waste	tons	t-s	243		
	Vinidur granules	tons	t	10		
	ATTITUME BY CHICKED	1011	8	80		
WERK NO	RD					
	Country and Inc		t	44,600	44,700	25X1
	Caustic soda lye	tons NaOH	5	29,475	32,626	25/1
	Caustic soda, solid	NaOH	t	10,493	10,800	
	tech.	110.011	8	6,500	6,600	
	Gaseous chlorine	tons	t		38,440	
	Liquid chlorine	tons	t	10,140	10,250	
	zadaza outos ma	AA110 .	8	7,085	6,750	

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### Rydrogen, uncompressed m3x103 t 11,350 ###################################		e ·	
Hydrogen, compressed m3x103 t 708 550 Barium carbonate tons t 1,427 2,400 Barium carbonate tons t 1,427 2,400 Hormit spray tons t 84 180 Hormin dust tons t=s 265 1,100 Caustic potash, low C1 content tons t=s 2,825 2,400 Chloride of lime tons t=s 2,787 2,400 Sodium hypochlorite tons t 6,816 6,600 bleaching lye s 6,593 6,300 Tooth paste tubesx103 t 2,022 3,000 Soup flavoring tons t=s 483 540 Soup flavoring tons t=s 483 540 Granulated soup tons t=s 178 240 Soup cubes tons t=s 206 240 Albumen powder tons t 576 500 Soup flavoring tons t=s 206 240	Quant	1952 Planned-	1953
Barium carbonate tons t 1,427 2,400 1,750 Hormit spray tons t 84 180 100 Hormin dust tons t=s 265 1,100 Gaustic potash, low Cl content tons t=s 2,825 2,400 Chloride of lime tons t=s 2,787 2,400 Sodium hypochlorite tons t 6,816 6,600 6,593 6,300 Tooth paste tubesx103 t 2,022 3,000 s 2,017 3,000 Siliron and trosilin tons t 28,780 26,000 s 28,656 25,900 Synthetic precious stones kilos t=s 4,027 3,600 Soup flavoring tons t=s 483 540 Granulated soup tons t=s 178 240 Albumen powder tons t 576 500 Albumen powder tons t 576 500	mpressed	11,350	
## Hormit spray tons t	ressed	650 530	
## Hormin dust	te	2,400 1,950	
Caustic potash, low C1 content tons t=s 2,825 2,400 Chloride of lime tons t=s 2,787 2,400 Sodium hypochlorite tons t 6,816 6,600 bleaching lye s 6,593 6,300 Tooth paste tubesxl03 t 2,022 3,000 s 2,017 3,000 Siliron and trosilin tons t 28,780 26,000 s 28,656 25,900 Synthetic precious stones kilos t=s 4,027 3,600 Soup flavoring tons t=s 483 540 Granulated soup tons t=s 178 240 Soup cubes tons t=s 206 240 Albumen powder tons t 576 500		180 100	
C1 content tons t=s 2,825 2,400 Chloride of lime tons t=s 2,787 2,400 Sodium hypochlorite tons t 6,816 6,600 bleaching lye 5 6,593 6,300 Tooth paste tubesxl03 t 2,022 3,000 Siliron and trosilin tons t 28,780 26,000 Synthetic precious stones kilos t=s 4,027 3,600 Soup flavoring tons t=s 483 540 Granulated soup tons t=s 178 240 Soup cubes tons t=s 206 240 Albumen powder tons t 576 500 Soup flavoring tons t=s 576 500 Soup cubes tons t=s 576 500		1,100	
Sodium hypochlorite bleaching lye tons t 6,816 6,593 6,300 6,300 Tooth paste tubesxl03 t 2,022 3,000 s 2,017 3,000 Siliron and trosilin tons t 28,780 26,000 s 28,656 25,900 Synthetic precious stones kilos t=s 4,027 3,600 Soup flavoring tons t=s 483 540 Granulated soup tons t=s 178 240 Soup cubes tons t=s 206 240 Albumen powder tons t 576 500 500 s 554 500 500		2,400	
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s 2,017 3,000 Siliron and trosilin tens t 28,780 26,000 synthetic precious 28,656 25,900 Synthetic precious kilos t=s 4,027 3,600 Soup flavoring tens t=s 483 540 Granulated soup tens t=s 178 240 Soup cubes tens t=s 206 240 Albumen powder tens t 576 500 s 554 500	orite e	6,600 6,300	
s 28,656 25,900 Synthetic precious stones kilos t=s 4,027 3,600 Soup flavoring tons t=s 483 540 Granulated soup tons t=s 178 240 Soup oubes tons t=s 206 240 Albumen powder tons t 576 500 s 554 500	, t	3,000 3,000	
stones kilos t=s 4,027 3,600 Soup flavoring tons t=s 483 540 Granulated soup tons t=s 178 240 Soup cubes tons t=s 206 240 Albumen powder tons t 576 500 s 554 500	osilin	26,000 25,900	
Granulated soup tons t=s 178 240 Soup cubes tons t=s 206 240 Albumen powder tons t 576 500 s 554 500		3,600	25X1
Soup cubes tons t=s 206 240 Albumen powder tons t 576 500 s 554 500		540	
Albumen powder tons t 576 500 s 554 500	q.	240	
a 554 500		240	-
Sauce cubes tons tes 106 106		500 500	
		106	
Cerium spark metal tons t=s 1.4	etal	4 7.	2
Calcium-aluminum alloy tons t=s 60 36	um alloy	36	
		120 120	
Bearing metal (reclaimed) tons t=s 318 480		. 480	
Ferrochromium tons t 379 1,200 s 365 1,200		1,200 1,200	
Ferromolybdenum tons t=s 300	ım.	300	
Ferrotitanium tons t=s 43 150		150	

			- 11 -		-	25X1
	<u>Product</u> <u>Quar</u>	tity	Total=t	Actual-1952	Planned-1953	
			Sold=s			
	Ferrovanadium	tons	t=s		30	
	Ferrotungsten	tons	t=8	0.1.	300	
	Molybdenum (chemically				* •	25X1
	pure)	tons	t=s	6	6	
	Tungstic acid	tons	t s	32.6 21	30 30	
	Sulphuric acid residues	tons		946		
	Alkaline filling materials	tons	t=s	72		
	Aluminum-hickel powder	tons	t=a	1.4		
	Aluminum oxide	tons	t=a	0.5		
	Barium metal	tons		0.9		
	Anhydrous calcium chloride	tons	t=s	12		
	Cobalt metal powder	tons		14		
	Cobalt sulphate Corundum containing material	tons		3.2	**	
		tons		14		
	Magnesium-aluminum alloy Mg-Fe-Si-Cu alloy	tons	· -	14		
	Magnesium-nickel alloy	tons		0.3		
	Magnesium powder	tons		3.9		
	Magnesium turnings	tons		2.2		
	Magnesium rods	tons		0.6		
	Magnesium cubes			1.9		
	Molybdenum chalk (Molybdaenkalk)	tons tons	_	3.4 0.9		
	Molybdic anhydride (MoO3)	tons	t=s	0.3		
	Phosphorus-copper	tons		5.0		
	(from recovery)		D			
	"Siebkalk" (filtering lime)	tons	t=s	13.0		
	Tungsten (chemically pure) Tungsten (chemically pure)			0.5		
	from residues	tons	t=s	18.9		
Light	metal department					
	Darmanna - January			-4		25X1
	Foundry aluminum	tons	t	16,271 9,321	21,500 15,910	
	Purest aluminum	tons	t	212	185	
			8	291	185	
	Aluminum powder					
	(Griess)	tons	t s	564 24	1,800 100	
			-	. ~ ~	700	
	Aluminum rivet alloys from scrap	tons	t s	119 38	640 -	
	Aluminum casting alloys from scrap	tons	t s	5,300 3,529	5,360 4,440	
	Articles in cast aluminum	tons	t	7,407	4,300	

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25X1

7					
. Product	Quantity Tot	al=t d=s	Actual-1952	Planned-19	253
Extrusion press semi- finished articles	- tons	t	5,231 4,383	3,300	
aluminum silloy		Þ	4,303	2,110	
Die-press products in	tons	t	87	30	
aluminum alloy		S	32	30	
Aluminum alloy castir	ngs tons	t ,	1,748 1,678	1,300 1,300	
Raw magnesium	tons	t			
, ,	00118	U	<u>-</u>	750	
Magnesium alloy from *New" metal	tons	t=s	-	750	
Magnesium alloy from	scrap tons	t	1,289	850	
	-	8	769	775	
Castings in Mg alloy	tons	t .	319	70	
		8	309	70	
Vinidur buckets	tons	t	276	200	25X1
•		5	276	200	
Welding alloys	tons	t	194	180	
		8	193	180	
Steel castings	tons	t	446	350	
		8	427	350	
Magnet alloys	tons	t	107	300	
		8	107	300	
Aluminothermic	tons	t	: 11	36	
manganese		8	6	24	
Ferromolybdenum	tons	t	59	100	
		8	58	100	
Ferrovanadium	tons	t	· -	40	
		8		40	
Ferrotungsten	tons	t	118 115	180 180	
	0.2	8		190	
Dustbins Bedsteads	items 1000's	8	2,886		
Bicycle pumps	1000's	5	37.4 556		
Ferrochromium	tons.	t	20.1 17.5		
Ferronickel	tons	8	12.3		
Ferrovanadium	tons	8	30.4		
Ferrotungsten	tons	8	161		
Ferrotitanium	tons	t	50		
Al-Fe alloy	tons	8 8	45 22.7		
Devarda's alloy	tons	5	0.1		

				1050	Planed 1052	
	Product	Quantity Total=t Sold=s	, <u>A</u>	tua1-1952	Planned-1953	
	P-Cu alloy	tons s		52		
	Iron sulphide	tons t		0.8		
	•	8		0.3		
	Welding powder	tons s		1.4		
	Joining electrodes	tons s		34.7		
	Light metals electrode	es tons s		1.0		
ower	station					
10	Electric current	KWhx106 t	. 1	,470	1,450	
1.	PISCOLIC GULLENA	E CTYTHAU	_	372	166	
		_	_		0 8884	
2.	Steam	tons $x = 10^3 t$	9	,534	9 ,778 547	
		8		523	<i>341</i>	
erso	on the first of Januar 12,756 persons (9,287	ry 1953, the EKB men, 3,469 women	Bitterfeld	i employed a were divide	total of d as follows:	
Perso	On the final of Januar	men, 3,469 womer	i). These	employed a were divide	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287	men, 3,409 womer Technical staff	, Male Female	854	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287	men, 3,469 womer	, Male Female	854 31	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287	men, 3,409 womer Technical staff	Male Female	854 31 462	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287	Technical staff	Male Female	854 31 462	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287 (a) Salaried grades:	men, 3,409 women Technical staff Commercial staff	7, Male Female Cf, Male Female	854 31 462 383 ——————————————————————————————————	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287	Technical staff	r, Male Female f, Male Female	854 31 462 383 	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287 (a) Salaried grades:	Technical staff Commercial staff Trained labor,	C, Male Female Cf, Male Female Cotal: Male Female	854 31 462 383 1,285 8,002 3,055	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287 (a) Salaried grades:	men, 3,409 women Technical staff Commercial staff	C, Male Female Cf, Male Female Cotal: Male Female Male	854 31 462 383 1,285 8,002 3,055 532	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287 (a) Salaried grades:	Technical staff Commercial staff Trained labor,	C, Male Female Cf, Male Female Cotal: Male Female	854 31 462 383 1,285 8,002 3,055 532	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287 (a) Salaried grades:	Technical staff Commercial staff Trained labor, Apprentices	Female Total: Male Female Male Female Male Female	854 311 462 383 1,285 8,002 3,055 532 342	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287 (a) Salaried grades:	Technical staff Commercial staff Trained labor, Apprentices	Female Total: Male Female Male Female Male Female	854 31 462 383 1,285 8,002 3,055 532	total of d as follows:	
Perso	On the first of Januar 12,756 persons (9,287 (a) Salaried grades:	Technical staff Commercial staff Trained labor, Apprentices	Female Total: Male Female Male Female Male Female	854 311 462 383 1,285 8,002 3,055 532 342	total of d as follows:	